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Mr. Spear's Report to the Local Government Board on the General Sanitary Condition of the Oswaldtwistle Urban Sanitary District.

GEORGE BUCHANAN,
Medical Department,
July 20th, 1887.

THE urban sanitary district of Oswaldtwistle is situated towards the northern extremity of the Lancashire coalfields, on soil that, in the populous parts, is mainly clay. The district is wide-lying, comprising 4,883 acres of well-elevated sloping land. The town of Oswaldtwistle is situated at the lower and northernmost part of this area, well elevated, however, above the "Tinker's Brook," a tributary of the Ribble, which skirts it. The outlying villages of Belthorn, Cross Edge, and Stanhill-with-Knazden are placed one to three miles away, and in different directions, on much higher ground. The population of the whole district is estimated at 13,400; Oswaldtwistle containing over 10,000 of that number. The industries are various, consisting of coal-mining, cotton-spinning, and the manufacture of chemicals and manures. The agricultural part of the district is, further, largely devoted to grazing purposes, and dairy-farming (markets being found at Blackburn and Accrington, as well as in Oswaldtwistle) is extensively carried on.

The following table gives the more important data relating to the vital statistics of the district:—

YEAR (Mean Population of Six Years, 12,800).	Births.	Total Deaths.	Deaths under one.	Deaths from various Causes.								
				Small-pox.	Measles.	Scarlatina.	Diphtheria.	Croup.	Whooping-cough.	Fever.	Diarrhoea.	
1881	-	478	247	91	—	1	1	1	—	14	4	9
1882	-	492	261	86	—	8	6	—	1	5	4	7
1883	-	457	255	79	—	1	14	—	3	—	13	13
1884	-	461	296	94	—	17	—	—	7	6	8	13
1885	-	475	265	75	—	14	4	—	3	13	5	9
1886	-	454	324	78	—	6	44	1	4	5	1	17
Mean ratio per 1,000 of population	-	21·5	179*			·64	·90			·66	·46	·91
Corresponding Ave- rage of England and Wales	-	19·3	144*			·41	·43			·46	·27	·65

* Deaths of children under one, are given in rates per 1,000 of births registered.

It will be seen that the principal mortality rates, compared with the corresponding averages of England and Wales, are excessive. Of the 13,400 inhabitants of Oswaldtwistle, 30 die annually over and above what would be the average death-toll. Of every 1,000 children born, 35 die before reaching the age of one year over and above the average number of deaths at that age. The mortality from "fever" is 70 per cent. higher than the average rate, and that from scarlatina rather more than double its corresponding average.

The "fever" mortality is practically all due to *enteric* or *typhoid* fever. This disease, the Medical Officer of Health informs me, is scarcely ever entirely absent from the district; and from time to time, at frequent intervals, small groups of cases, forming small localised outbreaks, occur. I examined,

myself, the circumstances of certain of these recent occurrences, in Nab Lane, Stanhill, at Cross Edge, and at Belthorn. In Oswaldtwistle town also, I saw two cases at the time under treatment. Since the commencement of the present year four deaths from this disease have been recorded.

As to scarlatina, the disease has been epidemic since the last months of 1885, and is only now subsiding. The Medical Officer of Health, only one of several gentlemen practising in the district, informs me that since the outbreak he has himself treated over 600 cases of the disease. On October 25th, 1886, the Sanitary Authority offered a fee to medical practitioners for notification of cases of infectious disease; and from that time to the end of the year (little more than two months) 100 houses were reported as infected with scarlatina.

The evidence goes to show that the disease spread by the ordinary channels of personal intercourse from family to family, no effectual precautions being taken, as I shall presently have to describe, by the Sanitary Authority.

Sanitary Condition of the District.

Sewerage and Drainage.—The town of Oswaldtwistle is the only part of the district regularly sewered. The sewers here are of socketed pipes, and there is one large brick culvert. They were laid some eighteen years ago. They possess, with few exceptions, a good gradient, although of those opened for my inspection two were found to contain considerable deposit, and in a few places catch-pits in the floor of the sewers have been improperly provided. The ventilation is altogether inadequate, being provided for in the ten miles or thereabouts of public sewers by not more than a dozen open manholes; and these openings, as might be expected under the circumstances, are the source of much complaint. The sewage is discharged unpurified into the Tinker's Brook, just below the town, and the Sanitary Authority, having been threatened with an action at law for this pollution, are about to devise some means for its remedy.

The private drainage of the town is by no means satisfactory. It is believed that a number of old brick and open-jointed drains remain, and a large proportion of the house connexions—yard gullies, &c.—are dilapidated, untrapped, or otherwise imperfect. Ventilation of house drainage is almost unknown. The Sanitary Authority have, however, required the “disconnexion” of kitchen slop-stone pipes, &c., and this work has generally been carried out, although often in so slovenly a way that a fresh nuisance from the soakage of foul liquids into the soil about the dwellings is not avoided.

The drainage of the outlying villages is provided for by various rough channels emptying into roadside gutters, or field ditches, or the nearest water-course; or sometimes slop-water with other filth is thrown anywhere about the dwellings. Serious nuisances from this cause were frequently observed.

The worst of the unwholesome conditions in the district are associated, however, with the method of *excrement disposal*. The old privy middens, large, deep, and sloppy, are in general use; they are often in very confined situations, and in certain cases give rise to a positively uninterrupted line of foul accumulations of filth behind and between the small rows of dwellings. Privy-pits, or tanks, large holes sunk in the ground beneath the closet seat, are provided in other cases, and generally in connexion with factory workshops, and as with them there is no admixture even of ashes with the excrement, their offensiveness is extreme. The Authority provide for the removal of the refuse, but very large accumulations occur, the privy-pits especially being left until the appearance of foul liquid on the surface, or on the closet floor, gives notice of the imperative need of the scavenger. In a few individual cases the Authority have secured the introduction of the box or pail closet, and here much improvement is observable; and in the case of one large school trough-closets, serving their purpose admirably, have been introduced. Except for this efforts have been confined to futile attempts to improve the old erections, especially to the introduction of a plan of draining privy-pits and middens into the public sewers; an



expedient that long ago was shown to be useless, and indeed mischievous. For new property, privy-middens of the old type, except that they are somewhat reduced in size and roofed over, are still being built.

The *Water Supply* of Oswaldtwistle town and of Stanhill is from works in the hands of the Sanitary Authority. The water is chiefly derived from the high moorlands two or three miles distant from the town, but to a considerable extent also from pasture land at a somewhat lower level, and through which the moorland water, in open streams or in loose stone channels, flows towards the reservoirs. This lower land is dotted over with farmsteads and cottages, and receives upon its surface, except for a few cases in which the Authority have intervened to secure a safer system of drainage, slop-water and other refuse matters; and consequently the water collected from this area, as well as that passing through it from the higher ground, is much exposed to danger of pollution. The whole supply is received into two reservoirs, and distributed unfiltered on the constant service system. The quantity is said to be sufficient.

Belthorn, the population of which is about 1,000, is very badly off for water, standing as it does above the reach of the public supply. The people have to resort to muddy pools, often at a considerable distance (a quarter of a mile or more) from their houses; and in dry summers even these sources fail.

Cross Edge is likewise situated too high for the public service. The inhabitants resort for the most part to a spring the water of which has been found on analysis to be of good quality, but which is nevertheless unprotected, and open to much risk of occasional contamination.

As to *House Accommodation*, the greater part of Oswaldtwistle town is of comparatively modern date, and the houses are fairly commodious; although back premises, containing the filth nuisances above referred to, are often very small and much enclosed. In the older parts of Oswaldtwistle town, and in the outlying villages, there are a number of houses deficient in ventilation from being built back-to-back or other cause, and these older houses are occasionally dilapidated and dirty. Overcrowding does not appear to exist to any notable extent, although the byelaws possessed by the Authority since 1884 for the regulation of "houses let in lodgings or occupied by members of more than one family" are not enforced. Dampness of houses, both new and old, is not uncommon; and the building byelaws of the Authority, dating from 1864, fail to prescribe the needful precautions for the prevention of this condition, and the object is consequently neglected even in houses now being erected. In another matter the insufficiency of the byelaws declares itself. Certain rows of houses have already been built upon refuse-tips levelled for the purpose; and refuse is still being deposited upon land that will before long form the sites of new streets. The deposit of this refuse requires stringent regulation.

The condition of the surface of *streets* and *roads* is a matter, likewise, that demands attention. Many of the side streets of Oswaldtwistle are in a condition to cause much unnecessary and injurious dampness and discomfort. Some half-dozen only have been metalled, paved, and channelled during the last few years.

The extent of the milk trade in the district renders it of much importance that the *Dairies, Cowsheds, and Milkshops Order* should be efficiently administered. It is estimated that some 110 places will require to be registered and regulated; and, judging from those that I visited, structural amendment in respect of drainage, &c., will be required for many of them. The Authority have recently framed regulations on this matter, and they still await confirmation.

The Authority possess no hospital for the isolation of *infectious disease*, although in the small dwellings of the district isolation is practically impossible in the vast majority of cases. Apart from isolation the means employed for limiting the spread of disease have been characterised hitherto by more than ordinary futility. A *scavenger* has usually been sent to visit infected premises—to scatter carbolic powder about the yard and privy, and to give disinfectants to the occupiers. The occupier's conception of the nature of a disinfecting process has generally led him in his turn to spill the fluid about the cottage

floors. Nothing of the smallest real value, in the way of disinfection, has resulted from these observances. In addition, in many cases, privy pails, emptied daily, have been provided, and, after the termination of the illness, infected rooms have often, but not always, been fumigated with sulphurous acid; whitewashing, re-papering, &c., have rarely been required. From the hundreds of dwellings infected with scarlatina during the year 1886, bedding, clothing, &c., were removed, either for proper disinfection in apparatus belonging to a neighbouring town, or for destruction, in only 12 instances. When scarlatina has appeared in dwellings connected with shops, dairies, &c., no further precautions than those spoken of have been enforced.

In October 1886 the Authority decided upon offering a fee of 2s. 6d. to medical practitioners for each notification of infectious disease. The step was, no doubt, in the right direction; but to give it useful effect, other methods must obviously be organised for dealing with the information acquired.

The Authority have in past years been placed at great financial disadvantage. Owing to the defalcations of a clerk the district incurred a loss of some 20,000*l.* For years the rates were very high, but now they have gradually been reduced to 2s. 6d. in the *£* per annum, while water and gas, the works of which are in the hands of the Authority, are supplied to the inhabitants of the central parts at a very reasonable cost. The past financial burdens of the district have, however, it would seem, resulted in a somewhat indiscriminate economy. For years the Medical Officer of Health was paid a salary of 10*l.* per annum; the sum was raised to 15*l.* to the present officer (the late one having died of typhoid fever), and within the last few months to 20*l.* Still the Medical Officer of Health frankly states that he cannot afford to perform the duties of the office as prescribed by the Local Government Board for such remuneration. At the meeting of the Authority which I attended, at the close of my inspection, I laid stress upon the experience of the Board on this point: that the efficiency or non-efficiency of local sanitary administration is found to be determined in the main by the character of the work done and advice given by the Medical Officer of Health. I pointed out that in ordinary circumstances it is found that sanitary reforms involving the expenditure of money, whether public or private, encounter opposition and indifference only to be successfully combated by the untiring and well-directed advocacy of one specially qualified to advise from the high ground of the public health. The failure in the administration of the district recorded in this report is explicable from this point of view. Although the Medical Officer of Health possesses a fair general knowledge of the sanitary circumstances of the district, that well-directed, precise, and persistent advice for the remedying of its various unwholesome conditions, of such prime importance, is notably absent. The annual reports, forwarded to the Board pursuant to their General Order, have, on different occasions, formed the subject of unfavourable comment by the Board on account of the meagreness of the information they convey, yet with little exception they give the information afforded to the Sanitary Authority themselves—the information, that is to say, upon which the Authority are expected to shape their action, for monthly reports are rarely presented, and quarterly reports comprise little more than general remarks upon the mortality and sickness prevailing.

Mr. Hunter, the Surveyor and Inspector of Nuisances, is an active officer, and knows his district well. He has acquiesced in a very improper measure—the drainage into the sewers of privy-pits and ash-pits—not because he has regarded it as a sufficient remedy, but because of the opposition that a more radical one entailed; but this mistaken action does not fairly represent his qualifications, which on the whole are excellent, for the post he holds. His duties are, however, too multifarious; as Surveyor he has many miles of highway under his control, building operations, which he has to supervise, have been in active progress, and the water and gas works are under his management. Under these circumstances the time spent in the performance of the duties of an Inspector of Nuisances has necessarily been quite insufficient, while some of the more important of these duties, the disinfection of infected dwellings, &c., have been delegated to unskilled labourers.

At the conclusion of my inspection I met the Sanitary Authority, and related to them in some detail the results of my inspection. The Chairman, on behalf of the Authority, promised to give my recommendations all proper attention.

JOHN SPEAR.

June 3rd, 1887.

RECOMMENDATIONS.

1.—*As to Sewerage and Drainage.*

The sewers of Oswaldtwistle town should be adequately ventilated, and necessary means should be adopted to maintain them free of deposit. Provision should be made without delay for the purification of the sewage before discharge into the stream.

In the outlying villages sufficient sewers should be provided for the removal of sewage from the neighbourhood of dwellings without nuisance.

Brick or open-jointed private drains should be replaced by proper socketed pipes, duly ventilated, and provided with trapped gullies. No connexions should be allowed between privy-vaults or ashpits and the public sewers.

2.—*As to Excrement Disposal.*

The privy-middens of the district, now the source of general nuisance, should as early as practicable be abolished. In Oswaldtwistle town, where sufficient sewers and a sufficient water supply are available, water-closets may be most advantageously substituted; in the outlying villages tub-closets, with efficient scavenging arrangements, are probably to be preferred.

Ashpits of large size should be discouraged, and their place supplied by small receptacles, which should be frequently emptied.

3.—*As to Water Supply.*

For their general service the Authority should endeavour to obtain a sufficient supply of water from the higher moorland, conveying it to the reservoirs through the lower fields and past farmsteads and cottages in properly protected channels.

For Belthorn arrangements should be made for obtaining a general service of water, and at Cross Edge the sources should be adequately protected from surface and chance contamination.

4.—*As to House Accommodation.*

Unventilated, damp, and dirty dwellings should be dealt with under the provisions of the Public Health Act, 1875. The surface about dwellings (yards, &c.) should be sufficiently paved and drained to admit of easy removal of surface impurities. The building byelaws of the Authority should be revised.

5.—*As to Streets and Roads.*

The provisions of the Public Health Act, 1875, with regard to the metalling, flagging, and channelling of streets, &c., should be put into operation.

6.—*As to Dairies, &c.*

The provisions of the Dairies, Cowsheds, and Milkshops Order should be enforced as early and as thoroughly as practicable: arrangements being made for the careful and systematic inspection and regulation of places in which the milk trade is carried on.

7.—*As to Infectious Disease.*

The Authority should without delay make arrangements either alone or in combination with neighbouring Authorities for the provision of hospital accommodation for the isolation of cases of infectious disease. Proper disinfecting apparatus should likewise be provided.

8.—*As to Sanitary Administration.*

The Authority should make due provision for the discharge of the duties appertaining to the offices of Medical Officer of Health and Inspector of Nuisances; and should require that those duties, as they are prescribed by the General Order of the Local Government Board, be efficiently performed.
